Swimming as a lifelong physical activity

Learning, teaching and training activity

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Trnava University in Trnava (Slovakia)

Jana Labudova & Dana Masarykova

PRIME PETE
PRIMARY EDUCATION PHYSICAL EDUCATION TEACHER EDUCATION

UNIVERSITY OF LUXEMBOURG
Department of Education and Social Work

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Introduction

Short description of the study programmes at Trnava University:

Bachelor study 3 years – 180 ECTS

Preschool and elementary education

PE course – 10 ECTS – 3 hours lecture/2 hours seminar/2 hours exercise gym/1 hour practice in kindergarten

Master study 2 years – 120 ECTS

Teaching in Primary Education

PE course – 6 ECTS – 2 hours lecture/1 hour exercise gym/1 hour practice in primary school

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Introduction

Short description of the module:

Title: School Physical and Health Education

- The full module is focused on a complex understanding of quality physical education in primary schools and its implementation.
- It is taught in the 1st semester of the Master study
- Theory 2 hours/week
- Practice in gym 1hour/week
- Practice in schools 1hour/week

Short description of the micromodule:

Title: Swimming as a lifelong activity

- In this micromodule the students will especially get information on teaching methods and strategies in swimming as an important part of primary physical education. The practical activities will help the student with understanding and implementing swimming in PE classes.
- Theory classroom (2 hours)

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Introduction

- This micromodule is based on a the importance of swimming for children on one side but also its benefits for lifelong physical activity.
- Swimming and the water environment positively affects not only body itself but it has a very positive effect on mental and emotional health.
- The advantage of swimming is that you can perform it on a different level of difficulty, in every age (starting with babies finishing in elderly period).
- This physical activity is also crucial for safety and saving life in water environment.
- The micromodule will be composed of a first more theoretical part and a second part with practical videos.

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Chemical and physical properties of water

- Physical properties of water are given by two physical features: the pressure and density.
- Water density is defined by the ratio of weight and volume and the density is 800 to 1000 times bigger than air density. The density of water changes according to the content of mineral and chemical properties (mineral water, sea).
- Water includes desisenction and could be sensitive to skin and could start allergic reactions depending on the desinsection (chlorin, salt etc..).

Hydrostatic pressure

- Hydrostatic pressure effects the full body, but it is especially present in body cavities, which are filled with air (lungs, nasal cavities and middle ear).
- Breathing in water is much more difficult than in the air.
- Hydrostatic pressure affects also the heart.
- Blood is pressed into chest and heart works with larger amount of blood and reacts by stronger bumps (the heart volume is increased by 20%) and lower number of bumps. Heart rate decreases and the heart works more economically.

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Hydrostatic buoyancy

- Hydrostatic buoyancy is a power that lifts the body up.
- Archimedes' principle states that the upward buoyant force that is exerted on a body immersed in a fluid, whether fully or partially, is equal to the weight of the fluid that the body displaces.
- Hydrostatic buoayancy helps the body to float on water surface and this is also related body density, (gender, age).

A toddler has a better buoyancy than a man

Women have better buoyancy than men

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The influence of hydrostatic buoyancy on the human body

- Hydrostatic buoyancy works against the gravity, helps the movement apparatus, has a lower impact on spine, joints and ligaments.
- The horizontal position in water enables better blood circulation.
- The buoyancy helps to lower the body weight in water according to the depth of diving

Body in waist water – 50% of weight,

Body in chest water- 25-30% of weight,

Body in knee water – 10% of weight.

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Thermoregulation

- Thermal conductivity of water is 23 to 25-times higher than the air.
- Neutral water temperature for human body is without movement 35 °C.
- Water temperature should be 28° - 34° C (according to child age).

Newborns – 36 to 37°C (max 10 min.)

2 – 3 months - 34 °C (max 10 min.)

4 – 6 months - 32°C (max 20 – 30 min.)

7 – 12 months - 30 – 32°C (depending on adaptation also longer than 30 min.)

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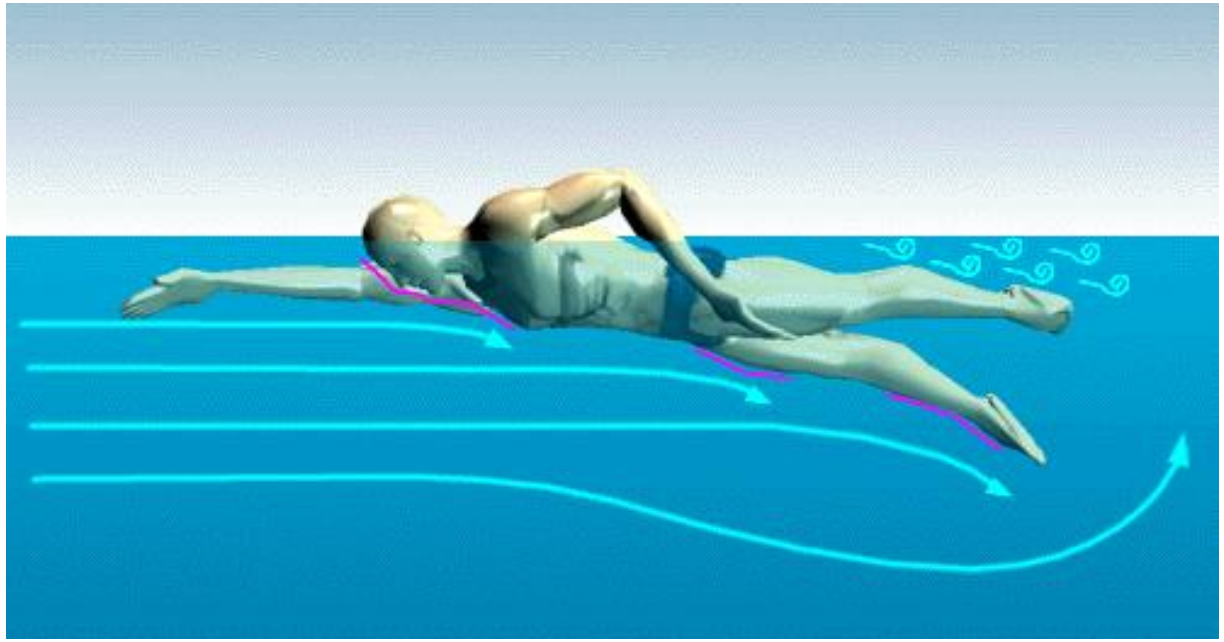
Complete resistance = frictional resistance+ frontal resistance+ whirling resistance



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Positive influence of water environment on human body

- Lower body weight
- Lower load on spine and joints
- Involvement of large number of muscles
- Possibility to isolate one muscle group
- Better blood circulation
- Higher energetic outcome
- Skin massage
- Elimination of injuries
- Development of water feeling for lifelong physical activity
- Possibility to participate in swimming during the whole life with no limitations

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Swimming skills

- They are learned in the process of motor learning in water environment.
- The technique itself is conditioned by various factors e.g. body composition, genetic disposition, physical abilities, age etc.
- The learnt skill is a disposition to move in water safely, accurately and economicaly.

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Basic swimming skills

- Breathing in water
- Diving and orientation in water environment
- Floating and gliding
- Jumping and falling into water
- Basic swimming movement

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Breathing games

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Diving and orientation in water

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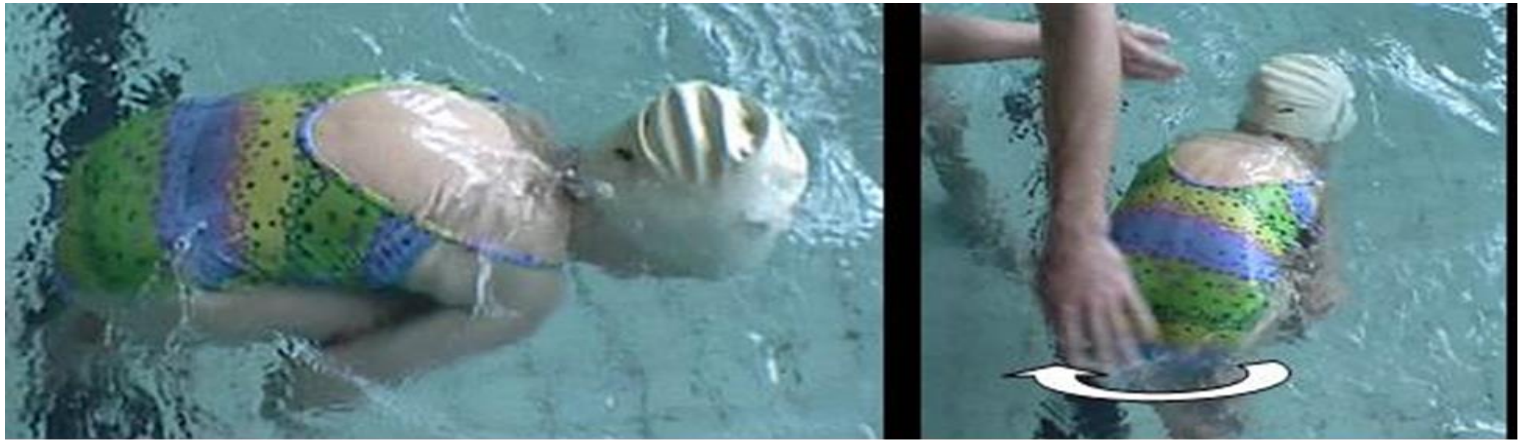
Floating and gliding



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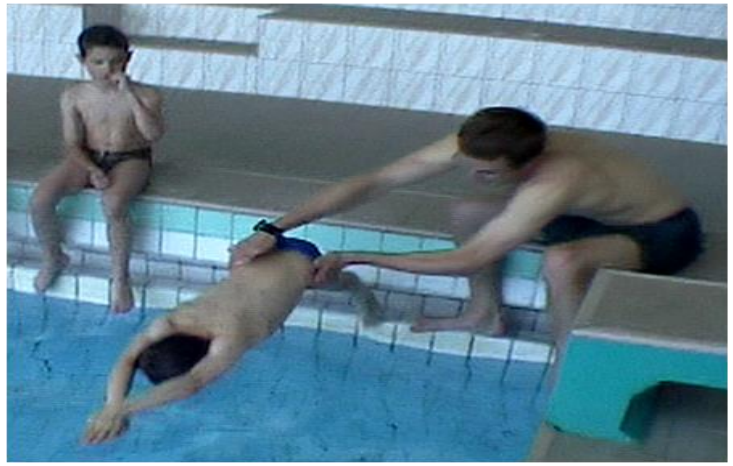
Jumping into water



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Basic swimming movements

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Description of different levels of swimmers

good swimmer	intermediate swimmer	poor swimmer
- 200 – 400 m any style with correct swimming technique - jump into deep water - 50 m of 2 other styles	- 100 – 200 m freestyle - jump into deep water - 50 m of 1 other style	-50 – 100 m freestyle - jump into shallow water

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Your task (10’ time)

- Look for your country specific primary education curriculum and try to identify the content related to swimming.
- Does your country has any specified requirements for teaching swimming in primary schools?
- Do you have any experience on teaching swimming? Would you like to teach swimming?
- Based on this information please present shortly a country specific report related to swimming.

Join: dana’s galaxy password:qhqh5146

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